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Canada

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D119-796-251
Job Sheet 197935



Part No: D119-796-251

Job Qty: 1 pcs

Part Name: Aft Crosstube Installation With Step (No Hardware)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/18/19

Job Tracking No:

Due Date: 1/29/20

Created By: Marie Lajeunesse

Type: SOLD

Description: ORDER 17375

Note: DWG D119-796-251 REV F, IIN-D119-796 REV G IPP REV:A 14.09.09 NEW ISSUE DD VERF:JLM IPP REV:B 14.10.15 AS PER REV.A DD VERF:JLM IPP REV:C 14.11.19 AS PER REV.C DD VERF:JLM IPP REV:D 14.12.09 AS PER REV.PC6 DD VERF:JLM IPP REV:E 15.02.11 AS PER REV D JLM VERF:DD IPP REV:F 17.12.11 REMOVE PACK KIT DD VERF:DP IPP REV:G 19.05.17 AS PER DWG REV.F DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	Crosstubes - 1	1 pcs	1/29/20	1/29/20	0.50	4.17	Crosstubes - Bend	
110	QC 15	1 pcs	1/29/20	1/29/20	0.00	0.00	QC 15 - 12	
							QC 15 - 3	
							QC 15 - 47	
							QC 15 - 49	
							QC 15 - 58	
							QC 15 - 9	
							QC 15 - 68	
120	Crosstubes - 3 - B4B	1 pcs	1/29/20	1/29/20	0.00	3.30	Crosstubes - 1 - B4B	
							Crosstubes - 2 - B4B	
							Crosstubes - 3 - B4B	
							Crosstubes - 4 - B4B	
130	Crosstubes - 4 - B4B	1 pcs	1/29/20	1/29/20	0.00	1.28	Crosstubes - 1 - B4B	
							Crosstubes - 2 - B4B	
							Crosstubes - 3 - B4B	
							Crosstubes - 4 - B4B	
140	QC 7	1 pcs	1/29/20	1/29/20	0.00	0.00	QC 7 - 10	
							QC 7 - 13	
							QC 7 - 14	
							QC 7 - 15	
							QC 7 - 17	
							QC 7 - 18	
							QC 7 - 19	
							QC 7 - 2	
							QC 7 - 28	
							QC 7 - 3	
							QC 7 - 30	
							QC 7 - 34	
							QC 7 - 36	

Scrap
mo

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				QC 7 - 37	
				QC 7 - 41	
				QC 7 - 47	
				QC 7 - 48	
				QC 7 - 51	
				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	
				QC 7 - 9	
				QC 7 - 68	
				QC 7 - 50	
				QC 7 - 67	
				QC 7 - 40	
				QC 7 - 24	
				QC 7 - 43	
				QC 7 - 61	
				QC 7 - 81	
160 QC 5	1 pcs	1/29/20	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
				QC 5 - 61	
				QC 5 - 81	
170 Outsource - 2 - NDT per QSI038	1 pcs	1/29/20		SKY002-VC	2
180 Packaging 2-1 - Receive - B4B	1 pcs	1/29/20	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	

					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
190	QC 6	1 pcs	1/29/20	0.00 0.00	QC 6 - 9	
					QC 6 - 68	
					QC 6 - 61	
					QC 6 - 40	
200	Spray Paint - 2 - B4B	1 pcs	1/29/20	0.00 1.31	Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
					Spray Paint - 4 - B4B	
210	QC 14	1 pcs	1/29/20	0.00 0.00	QC 14 - 15	
					QC 14 - 2	
					QC 14 - 34	
					QC 14 - 41	
					QC 14 - 51	
					QC 14 - 58	
					QC 14 - 59	
					QC 14 - 9	
					QC 14 - 68	
					QC 14 - 40	
					QC 14 - 19	
					QC 14 - 43	
					QC 14 - 24	
					QC 14 - 61	
					QC 14 - 81	
220	Crosstubes - 5 - B4B	1 pcs	1/29/20	0.00 3.30	Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
230	QC 5	1 pcs	1/29/20	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	

240	Spray Paint - 3 - B4B	1 pcs	1/29/20	0.00 1.31	QC 5 - 61	
					QC 5 - 81	
					Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
250	Spray Paint - 4 - B4B	1 pcs	1/29/20	0.00 1.31	Spray Paint - 4 - B4B	
					Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
					Spray Paint - 4 - B4B	
260	QC 14	1 pcs	1/29/20	0.00 0.00	QC 14 - 15	
					QC 14 - 2	
					QC 14 - 34	
					QC 14 - 41	
					QC 14 - 51	
					QC 14 - 58	
					QC 14 - 59	
					QC 14 - 9	
					QC 14 - 68	
					QC 14 - 40	
					QC 14 - 19	
					QC 14 - 43	
					QC 14 - 24	
					QC 14 - 61	
					QC 14 - 81	
290	Crosstubes - 6 - B4B	1 pcs	1/29/20	0.00 1.00	Crosstubes - 1	
					Crosstubes - 2	
					Crosstubes - 3	
					Crosstubes - 4	
300	QC 5	1 pcs	1/29/20	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
310	Packaging 1-1 - Pick Kit - B4B	1 pcs	1/29/20	0.00 0.00	Packaging 1 - 1 - B4B	
					Packaging 1 - 2 - B4B	
					Packaging 1 - 3 - B4B	
					Packaging 1 - 4 - B4B	
					Packaging 1 - 5 - B4B	
					Packaging 1 - 6 - B4B	
					Packaging 1 - 7 - B4B	
					Packaging 1 - 8 - B4B	
					Packaging 1 - 9 - B4B	
					Packaging 1 - 10 - B4B	
					Packaging 1 - 11 - B4B	
					Packaging 1 - 12 - B4B	
					Packaging 1 - 13 - B4B	

				Packaging 1 - 14 - B4B	
				Packaging 1 - 15 - B4B	
				Packaging 1 - 16 - B4B	
				Packaging 1 - 17 - B4B	
				Packaging 1 - 18 - B4B	
				Packaging 1 - 19 - B4B	
				Packaging 1 - 20 - B4B	
				Packaging 1 - 21 - B4B	
				Packaging 1 - 22 - B4B	
				Packaging 1 - 23 - B4B	
				Packaging 1 - 24 - B4B	
				Packaging 1 - 25 - B4B	
				Packaging 1 - 26 - B4B	
				Packaging 1 - 27 - B4B	
				Packaging 1 - 28 - B4B	
				Packaging 1 - 29 - B4B	
				Packaging 1 - 30 - B4B	
				Packaging 1 - 31 - B4B	
				Packaging 1 - 32 - B4B	
				Packaging 1 - 33 - B4B	
				Packaging 1 - 34 - B4B	
				Packaging 1 - 35 - B4B	
				Packaging 1 - 36 - B4B	
320 QC 4	1 pcs	1/29/20	0.00 0.00	QC 4 - 28	
				QC 4 - 58	
				QC 4 - 69	
				QC 4 - 9	
				QC 4 - 46	
				QC 4 - 68	
				QC 4 - 72	
				QC 4 - 74	
330 Packaging 3-1 - Stock - B4B	1 pcs	1/29/20	0.00 0.00	QC 4 - 75	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	

				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
350 QC 21 - FG	1 pcs	1/29/20	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	
				QC 21 - FG - 53	

Part Op 100 - (CNC Alpha 160 Bender) Bend tube as per Dwg D119-796-241 using CNC bender program

Descriptions: 110 - (QC15- Crosstube Dimensional Check)

120 - ***** ENSURE PROPER JIG POSITIONING ***** 1-DRILL TUBE AS PER DWG USING DT10087 2- DRILL RIVET HOLES USING DT8787 FWD 3- DEBURR AND C'SINK RIVET HOLES AS PER DWG 4- FLIP TUBE, REPEAT STEP 2 AND 3 5- SCRIBE PART# AND BATCH# USING VIBRATING STYLUS ON INSIDE OF CUFF AS PER DWG D119-796-141

130 - 1- INSPECT AND REMOVE ALL MARKS FROM TUBE WITHIN LIMITS ON DWG D119-796-141 ***IMMEDIATELY AFTER GRINDING*** 2- PRESSURE WASH X-TUBE INSIDE AND OUT 3- ALODINE AND ACID ETCH X-TUBE INSIDE AND OUT AS PER QSI005. 4- Verify grinding marks By: _____

140 - (QC7-Inspect Chemical Conversion Coat)

160 - (QC5- Inspect part completeness to step on W/O)

170 - ISSUE P/O: _____ *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** C OF C IS REQUIRED

180 - (Receive & Inspect for Damage & Mat'l Certs) Ensure copy of NDT results attached to work order.

190 - All purchased or subcontracted products

200 - **VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____ ***MASK SCRIBE B# & P# AND VERIFY*** 1- Prime inside of tube. 2- Install

nut plates as per dwg (D2873-043) 3- Mask cuffs, (grounding clamp DT10319) and all other location as per note#2, sheet 4. 4- Prime exterior of tube per QSI005. Primer Batch: _____

210 - (QC14- Inspect Spray Paint) ***VERIFY BY _____ BATCH # TO MATCH W/O _____

220 - Assemble as per dwg D119-796-241 and QSI 1- Abrade mating surfaces with Scotch Brite 7447 and clean with Dupont 4105s or equivalent as per dwg. 2- Install D5152-043 with proseal 890 on concave surface, 0.100" MIN thick as per dwg using DT10112 (identified right and left) (SEE NOTE 13) ****MAINTAIN CLAMPING PRESSURE ON FOR MIN 72HRS**** Proseal Batch: _____ EXP: _____ PROSEAL CURE TIME 72 HOURS:

Start: _____ Finish: _____ 3- USE DT10304 PINS TO LOCATE SUPPORTS. INSTALL D5122-1 CENTER SUPPORT HAND TIGHT ONLY. DO NOT TORQUE. INSTALL RED TAG TQ INDICATE "D5122-1 CENTER SUPPQRT MUST BE BONDED PER IIN-D119-796 PRIOR TO FLIGHT".(SEE NOTE 9) 4- USE DT10304 PINS TO LOCATE SUPPORTS. Install Damper support and contact pads using proseal 890 per dwg and clamp in position, (SEE NOTE 12) Proseal Batch: _____ EXP: _____ PROSEAL CURE TIME 72 HOURS: Start: _____ Finish: _____ 5- INSTALL THE D5515-1 GROUNDING CLAMP AND ASSOCIATED HARDWARE PER DETAIL "C" PRIOR TO FINISHING. TORQUE THE MS21042-3 NUT 12-15 IN-LB. COMPLETELY SEAL THE EDGES OF THE CLAMP USING PROSEAL 890.

230 - (QC5- Inspect part completeness to step on W/O) ***VERIFY BY _____ BATCH # TO MATCH W/O _____

240 - ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____ ***MASK SCRIBE B# & P# AND VERIFY*** 1- Remove all non-fixed hardware

and clean any excess proseal. 2- Scuff tube with Scotch Brite 7447. 3- Mask cuff and all other location as per note#2. 4- Prime as per dwg and QSI005 Primer Batch: _____ 5- Apply matte clear as per dwg and QSI005 Clear Batch: _____

250 - ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____ ***MASK SCRIBE B# & P# AND VERIFY*** 1- Mask underside of tube as per

dwg. Mask cuff and all other location as per note#2. 2- Scuff tube with Scotch Brite 7447 3- Paint outside of crosstube Paint Batch: _____

260 - (QC14- Inspect Spray Paint) ***VERIFY BY _____ BATCH # TO MATCH W/O _____

290 - 1- Install step and clamp with the proper position per dwg D119-796-251 ***Torque all clamps to 50 IN-LBS max.*** 2- TRIM THE THREADED PORTION OF THE CLAMP LEAVING 1.5-4 THREADS IN SAFETY. BREAK SHARP EDGE 0.06 MAX. 3- Re-install non fixed hardware per dwg ***Torque clamps on damper and contact pad to 80-100 IN-LBS.*** 4- Apply a fillet-seal of proseal 890 around damper supports and contact pads. Proseal Batch: _____

300 - (QC5- Inspect part completeness to step on W/O) ***RE-CHECK TORCQUE ON CLAMP AS PER DWG.***

310 - (Pick Kit)

320 - (QC4- 100% Inspect kits for completeness)

330 - (Identify as per dwg & Stock Location: _____) Identify and pack for shipping as per PPP D119-796-251

350 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D119-796-241TRN	Crosstube Turning Detail	1 pcs (1 ea)	100-Crosstubes - 1	5181042
CR3212-4-07	Cherry Rivet	16 Ea (16 ea)	200-Spray Paint - 2 - B4B	
D2873-043	Nut Plate Assembly	1 pcs (1 ea)	200-Spray Paint - 2 - B4B	
D5122-1	Center Support, Upper	1 pcs (1 ea)	220-Crosstubes - 5 - B4B	
D5123-1	Clamp Cushion	6 pcs (6 ea)	220-Crosstubes - 5 - B4B	
D5123-5	Clamp Cushion	2 pcs (2 ea)	220-Crosstubes - 5 - B4B	
D5134-041	Damper Support Assembly, LH	1 pcs (1 ea)	220-Crosstubes - 5 - B4B	
D5134-042	Damper Support Assembly, RH	1 pcs (1 ea)	220-Crosstubes - 5 - B4B	
D5136-1	Contact Pad, LH	1 pcs (1 ea)	220-Crosstubes - 5 - B4B	
D5136-2	Contact Pad, RH	1 pcs (1 ea)	220-Crosstubes - 5 - B4B	
D5152-043	Aft Post Mount Assembly	2 pcs (2 ea)	220-Crosstubes - 5 - B4B	
MS21920-25	Clamp	10 Ea (10 ea)	220-Crosstubes - 5 - B4B	
D5123-3	Clamp Cushion	4 pcs (4 ea)	220-Crosstubes - 5 - B4B	
D5515-1	Grounding Clamp	2 pcs (2 ea)	220-Crosstubes - 5 - B4B	
MS21042L3	Nut	2 Ea (2 ea)	220-Crosstubes - 5 - B4B	
MS27039-1-08	Screw	2 Ea (2 ea)	220-Crosstubes - 5 - B4B	
NAS1149D0332J	Washer	4 Ea (4 ea)	220-Crosstubes - 5 - B4B	
D5149-043	Aft Step Base Assembly	2 pcs (2 ea)	290-Crosstubes - 6 - B4B	
MS21920-28	Clamp	2 Ea (2 ea)	290-Crosstubes - 6 - B4B	
AN174-3A	Bolt	2 Ea (2 ea)	310-Packaging 1-1 - Pick Kit - B4B	
MS21042L4	Nut	2 Ea (2 ea)	310-Packaging 1-1 - Pick Kit - B4B	
NAS1149D0432J	Washer	4 Ea (4 ea)	310-Packaging 1-1 - Pick Kit - B4B	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Crosstubes - 1	D119-796-241TRN	1	4	0
200-Spray Paint - 2 - B4B	CR3212-4-07	16	219	0
	D2873-043	1	39	0
220-Crosstubes - 5 - B4B	D5122-1	1	4	0
	D5123-1	6	102	0
	D5123-3	4	143	0
	D5123-5	2	164	0
	D5134-041	1	4	0
	D5134-042	1	4	0
	D5136-1	1	10	0
	D5136-2	1	16	0
	D5152-043	2	0	0
	D5515-1	2	2	0
	MS21042L3	2	1,049	0
	MS21920-25	10	78	0
	MS27039-1-08	2	421	0
	NAS1149D0332J	4	3,141	0
290-Crosstubes - 6 - B4B	D5149-043	2	0	0
	MS21920-28	2	120	0
310-Packaging 1-1 - Pick Kit - B4B	AN174-3A	2	8	0
	MS21042L4	2	3,016	0
	NAS1149D0432J	4	176	0

Part Specifications

Specifications could not be found.

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ITEM	QTY	P/N	DESCRIPTION
	X	D119-796-251	XTUBE ASSY (AW119 MKII AFT)
1	1	D119-796-241	XTUBE ASSY (AW119 MKII AFT)
2	4	D5123-3	CUSHION
3	2	D5149-043	AFT STEP ASSY
4	4	MS21920-25	CLAMP

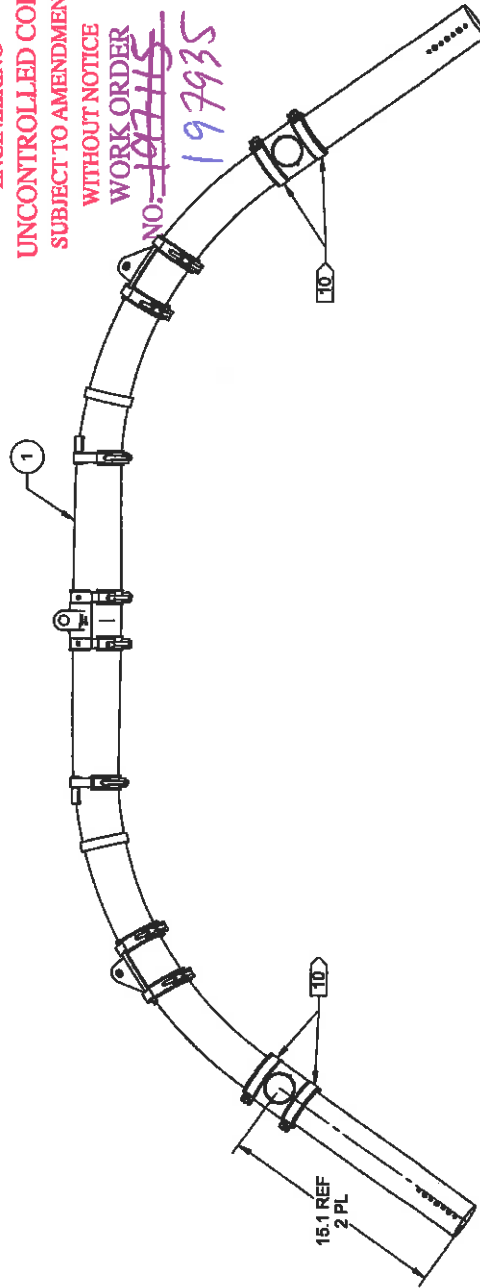
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WITHOUT NOTICE
WORK ORDER
NO: ~~197715~~

197935



D119-796-251 XTUBE ASSY (AW119 MKII AFT)

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 METHOD 6.5
 - 7) WEIGHT: 28.9 lbs
 - 8) TORQUE MS21920-25 CLAMPS TO 50 IN-LBS MAX
 - 9) LOCATE STEP USING POST FITTING ON CROSSTUBE
 - 10) POSITION MS21920 CLAMPS SECURING THE STEP AS SHOWN. THE THREADED PORTION OF THE CLAMP MUST FACE THE SAME DIRECTION AS THE STEP
 - 11) TRIM THE THREADED PORTION OF THE CLAMP ALLOWING 1.5 - 4 THREADS IN SAFETY. BREAK SHARP EDGE 0.06 MAX.

RELEASED

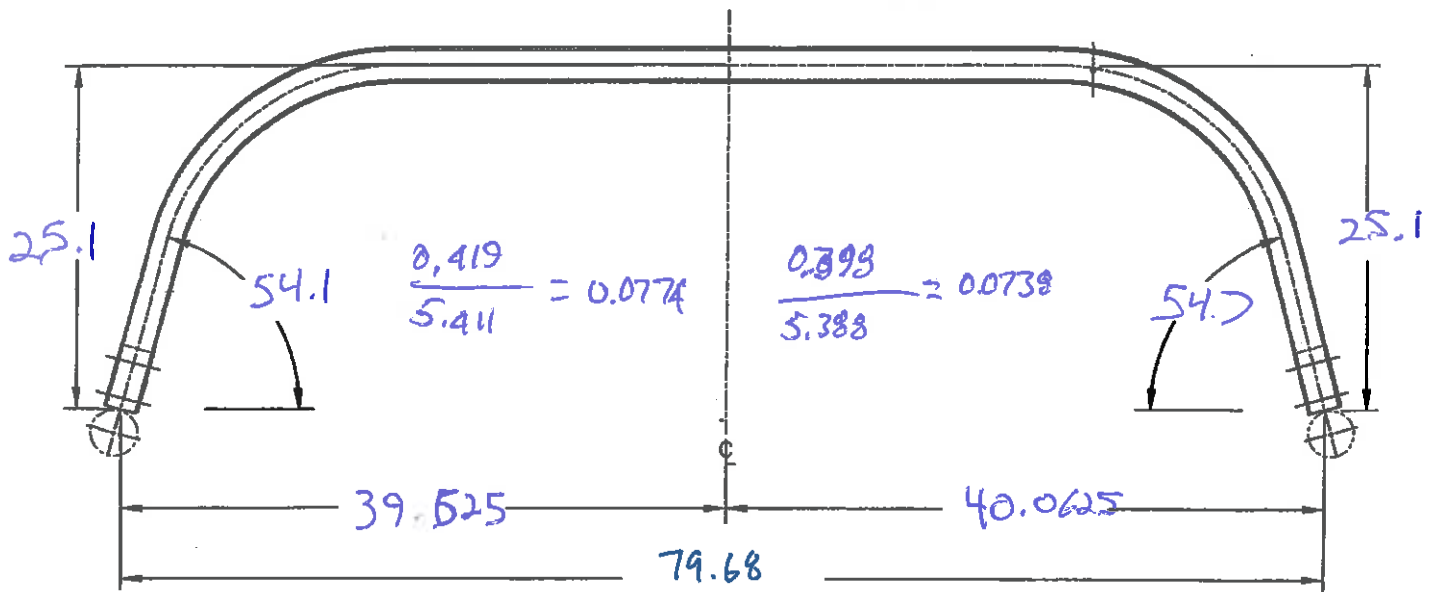
2019 MAY 07
B-N 15-7-03

APPROVED

REV.	DESCRIPTION	BY	DATE
F	ADD NOTE 11 (CAR18-290)	MW	19.04.05
E	MODIFY CLAMP ORIENTATION, ADD NOTE 10, REMOVED SECTION A-A (PAR16-527)	ML	17.02.10
D	D5123-3 WAS D5123-4, MS21920-25 WAS -2B, ADDED SECTION A-A	AP	15.01.19
C	RE-DESIGN STEP INSTALLATION	DB	14.11.24
B	D2274 RADIUS BLOCK WAS D5153-1, AN4C12A WAS AN4C10A	AP	14.10.04
A	NEW ISSUE	AP	14.08.03
DESIGN	AP	MW	DATE
DRAWN			
CHECKED	ZF		
MFG. APPR.	JFS		
APPROVED	NO		
DE APPR.	CP		
DATE	19.04.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D119-796-251			
REV. F			
SHEET 1 OF 1			
TITLE XTUBE ASSY (AW119 MKII AFT)			
SCALE NTS			
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DART AEROSPACE LTD		Work Order:	
Description: Crosstube Aft, with Step		Part Number:	D119-796-241
Inspection Dwg: D119-796-241 Rev: K		Page 1 of 1	

Required Dimension	Min	Max
Height	24.840	25.100
1/2 Span	39.810	40.070
Angle	54°	57°
Total Span	79.620	80.140
Bending Passes	8	—
Crushing	—	8.5%



	Side A	Side B
Bending Passes		
Crushing	7.7%	7.4%
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	15.04.14	New Issue	KJ	
B	15.11.12	Min angle revised	KJ	
C	15.12.15	Dwg Rev updated	KJ	
D	17.07.12	Dwg Rev updated	KJ	
E	19.07.08	Dwg Rev updated	MG	

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____		DISPOSITION		DEPARTMENT/PROCESS				Engineering			
Part No. _____		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube ☐ Machining ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Water Jet ☐ Supplier ☐ Quality ☐	
Date: 14/7/26		Sequence #: _____		QTY Affected: _____		MRB (Q51042)					
Description Work Order Deviation				Disposition							
Tube is overbent and uneven, Scrap. Too narrow and uneven. 9/14/7/26				Completed By Lead hand / Supervisor QC / QA Coordinator DAS 68 JUL 30 2019							
Root Cause				FAULT CATEGORY							
Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐				Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____							
				Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐							